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Final Project Reflection

The objects I chose for my 3D scene was a lava lamp, box of baby food, a notebook, and a seasoning shaker. I chose the lava lamp because it would require a very fine touch with spacing to get all the pieces correct. Though choosing the shapes wasn’t hard for the lava lamp my positioning skills were challenged. I chose the box of baby food because the shape of the object would challenge me. It took four shapes to make this box of baby food. One rectangle and 3 prisms facing vertical opposite directions on top of the box to make a trapezoid. I chose the seasoning shaker because, though the shape was simple, it would be a decent challenge to align the shaker spatially with the other objects. And I chose the notebook because placing it behind all the other objects would give my 3D scene more depth and allow me to practice correctly organizing my shapes to match the image I chose.

I had different functions for navigating the 3D scene inputted into GLFW\_KEYS while also allowing mouse controls to navigate the camera system within it. The GLFW-KEYS allowed you to move side to side, up, down, forward, and backward on the plane. Moving the camera around the scene required the A,W, S, D, Q and E buttons while viewing the 3D scene. The mouse was able to handle any type of vision movements. I didn’t successfully manage to complete the functionality to switch from Perspective to Orthographic view and back because I was missing one function but I couldn’t figure out what it was.

I used the custom functions for rending my shapes in an organized manor that would allow any software engineer to go back and change or update the image as they considered necessary naming each different rendering by the shape being created. These functions allow the shapes to be manifested, positioned, rotated, and scaled to different sizes. They also allow customization to the textures, colors, and lighting of the 3D scene. All of these options are easily changeable making this project reusable and updateable.